

The evaluation of relation between bilirubin to albumin ratio in first day of admitted icteric neonates and response to treatment

Abstract:

Background and Objectives: Neonatal jaundice is one of the most common problems in the neonatal period. Bilirubin encephalopathy (kernicterus) is the gravest outcome that may result from severe indirect unbound hyperbilirubinemia. This study is designed to measure the bilirubin to albumin ratio and assess the relation between this and response to treatment.

Materials and Methods: 100 healthy term neonates that admitted with icter in bootali hospital were selected. After physical examination and achieving the agreement of parents, blood samples were drawn for serum bilirubin and albumin. After collecting all information the data analysis was performed with the SPSS 19 software and described with t test and pearson product-moment correlation coefficient(r).

Results: the mean of albumin in groups was not differing significantly (4.6 ± 0.1). The mean of bilirubin to albumin ratio in group with ≤ 48 h phototherapy was 3.6 and 4.1 in the other group. The relation between this ratio and total bilirubin after treatment was 42% ($p=0.001$). This relation also found for total bilirubin before treatment and after treatment.

Conclusion: there was not significant different between the relation of bilirubin to albumin ratio and total bilirubin in response to treatment. But it can be useful as an additive criterion in companionship with total serum bilirubin.

Key words: bilirubin, albumin, neonatal jaundice, kernicterus